

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014**

**Subject Code: 170503**

**Date: 05-06-2014**

**Subject Name: Plant Design and Project Engineering**

**Time: 02:30 pm - 05:00 pm**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss different factors need to be considered for selection of chemical plant. **07**  
(b) Short note: - Techno – economic feasibility survey. **07**
- Q.2** (a) Explain in detail types of flow diagrams. **07**  
(b) Differentiate: - Standard and Special equipment. **07**
- OR**
- (b) Write a brief note on piping design and its layout. **07**
- Q.3** (a) Brief note on types and selection of valves. **07**  
(b) Importance of utilities in chemical industry. Discuss **07**
- OR**
- Q.3** (a) Briefly explain pilot plant and its importance. **07**  
(b) Introduce various factors in plant layout. **07**
- Q.4** (a) State and explain types and methods for estimation of total capital investment. **07**  
(b) Enlist factors involved in project cost. **07**
- OR**
- Q.4** (a) List out factors affecting investment and production cost. **07**  
(b) Name types and explain methods for determine depreciation in brief. **07**
- Q.5** (a) Note in brief: - Methods for profitability evaluation. **07**  
(b) With example explain practical factors in alternative investment and replacement studies. **07**
- OR**
- Q.5** (a) Using diagram explain break – even point and discuss importance of break even analysis. **07**  
(b) CPM and PERT. Short note. **07**

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